

[illegible]

finding the correlation of a rear section of the identified output of said code-modulated reproduced data and a GAP pattern for correctly reproducing the final bit of said reproduced data; and

specifying the position of a data portion based on the correlation thus found.

4. The method of detecting data synchronization according to claim 1, further comprising:

finding, for a data position detection pattern provided at an intermediate position in the data, the correlation of an intermediate portion of the identified output of code-modulated reproduced data and a data position detection pattern; and

specifying the position of a data portion based on the correlation thus found.

5. The method of detecting data synchronization according to claim 1, further comprising selecting reproduced data used for data synchronization detection, or reproduced data used for position detection of a data portion, by means of a data quality signal representing the probability that there is an error in the identified output of the reproduced data.

6. A method of detecting data synchronization, wherein the start position of original data sandwiched between a first bit pattern for bit synchronization detection and a second bit pattern arranged after said

first bit pattern for detecting the terminal portion of the original data is detected, using said original data itself.

7. A method of recording information comprising the steps of:

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a step for scrambling data by two or more types of
scrambler;

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a step for code-modulating the scrambled data;

a step for counting the number of occurrences of a specified bit pattern in the bit sequence of this code-modulated data, in an arbitrary bit period;

a step for determining whether or not the position of a code-modulation codeword partition of the data can be specified by a prescribed threshold value of the count result of the number of occurrences of the specified bit pattern; and

a step for recording data obtained by code-modulation of data scrambled by the scrambler which has been determined to be capable of specifying the position of the code-modulation codeword partition.

8. The method of recording information according to claim 7, further comprising a step for recording the information of the scrambler which has been determined to be capable of specifying the position of the code-modulation codeword partition.

9. A method of reproducing information comprising:

detecting data synchronization using the data
synchronization detection method according to claim 1;
code-demodulating the data in accordance with a
specified code modulation phase;
descrambling the code-demodulated data with two or
more types of descrambler;
detecting error in respect of the descrambled data;
and
outputting as reproduced data the output data of the
descrambler for which the number of detected errors is
smallest.

10. A method of reproducing information using the
output data of a descrambler as reproduced data,
comprising:

inputting reproduced data including descrambler
information;

detecting data synchronization, using the data
synchronization detection method according to claim 1;

code-demodulating data in accordance with a
specified code-modulation phase;

error-correcting the code-demodulated data; and

descrambling in accordance with scrambling
information included in the error-corrected data.